



```

Db 361 GGAGTAAGTCCGGATCGACGACGCGGGGACACAGACGCTGGGGTGGCGGCGAGACC 420
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Db 421 GGTACCGGTCCGGGGGGGGGAGCCCGGCTCCGGGGGGGGGTGTGCGCTGCGCGGAGAGT 480
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Oy 661 GGGCATTGGACAGACGTTTGGGTTCTCGAAGAACTTCGGCGGAGAGTACGAGCTCGGGA 720
Db 661 GGGCATTGGACAGACGTTTGGGTTCTCGAAGAACTTCGGCGGAGAGTACGAGCTCGGGA 720
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Db 721 AGGAGGTGGGAGGGGGGCGGCTTGGAGACACTTCTCGCGGCTGCTCAAGAGGGCGAGT 780
Oy 781 ACAAGGGACAGACCGCTGCGGCTCAAGATCATCGCCAAAGCTAAGATGACAAAGCCAGAT 840
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Oy 901 TCGCAAAATCTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 960
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Db 961 GTGAGGAGAGAGATTTCTAGACAGATATTAAGCAGAGGCGGAGATACAGAGAGAG 1020
Oy 1021 ATGCGAAGAGATTTGTTGACAGATTTTGAAGCTAGTACGCTTCTGATCTTCAAGGGG 1080
Db 1021 ATGCGAAGAGATTTGTTGACAGATTTTGAAGCTAGTACGCTTCTGATCTTCAAGGGG 1080
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Oy 1141 CCATGAGATTTGATTTTGTCTCTGATTTTCAATTTAGACAGATGAAAGGCTTAATG 1200
Db 1141 CCATGAGATTTGATTTTGTCTCTGATTTTCAATTTAGACAGATGAAAGGCTTAATG 1200
Oy 1201 ATTTTGTGGAATGATATATATGTTGGCCCAAGGTTTACACAGATCATATATATG 1260
Db 1201 ATTTTGTGGAATGATATATATGTTGGCCCAAGGTTTACACAGATCATATATATG 1260
Oy 1261 AACGACAGATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1320
Db 1261 AACGACAGATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1320
Oy 1321 TCTGGGACAGACAGATCAGAAATATTCGATCTGTGTTGAGAGCTGATCCCACTTTG 1380
Db 1321 TCTGGGACAGACAGATCAGAAATATTCGATCTGTGTTGAGAGCTGATCCCACTTTG 1380
Oy 1381 ATGATTCACGCTGCTACAGTATCAGCTGAGCTAAGATTTTGAAGAGATTTCTGA 1440
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Db 1501 ATGAAAGAGGAGATCCGCTGGAGATACATCTTCAATTAATTAAGCAATACCTCC 1560
Oy 1501 ATGAAAGAGGAGATCCGCTGGAGATACATCTTCAATTAATTAAGCAATACCTCC 1560
Db 1501 ATGAAAGAGGAGATCCGCTGGAGATACATCTTCAATTAATTAAGCAATACCTCC 1560
Oy 1561 GGGTACACCTTTAAAGGTTGGCATTTAAAGGACATATCCAGGCTTTAAAGGAGATG 1620
Db 1561 GGGTACACCTTTAAAGGTTGGCATTTAAAGGACATATCCAGGCTTTAAAGGAGATG 1620
Oy 1621 AACTTTGTATCTCAAACTGAGTTTAAAGCTGCAAGCTAGAGATGGGTTGTATCAC 1680
Db 1621 AACTTTGTATCTCAAACTGAGTTTAAAGCTGCAAGCTAGAGATGGGTTGTATCAC 1680
Oy 1681 TTGACAACTTTGAGAGGAGCTAAGCGATATTTAACTGATCTATGAGAGATCGAGG 1740
Db 1681 TTGACAACTTTGAGAGGAGCTAAGCGATATTTAACTGATCTATGAGAGATCGAGG 1740
Oy 1741 TTTCTGAATTTTTCATGCGGTGGAGACACTTGCATACAGAAATGGACTTTGAAGAGT 1800
Db 1741 TTTCTGAATTTTTCATGCGGTGGAGACACTTGCATACAGAAATGGACTTTGAAGAGT 1800
Oy 1801 TCTGTGCGGAGCAATGATCTTACAGCTTGAAGGCTGGAAGGTGGAGAGATTTG 1860
Db 1801 TCTGTGCGGAGCAATGATCTTACAGCTTGAAGGCTGGAAGGTGGAGAGATTTG 1860
Oy 1861 CTGGAAGAGCTTTCCAGCAATTTGAACAGAGGCAACGAGTCATATTCAGTTGAGAGAT 1920
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Oy 1981 AATCCGATGCAAGCTAAGCTTCTGCGGTTTACCAATTTTACATGATGATGATGAT 2040
Db 1981 AATCCGATGCAAGCTAAGCTTCTGCGGTTTACCAATTTTACATGATGATGATGATGAT 2040
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Db 2041 GGGGCTCAATTAAGAGCGCTAATTAAGCGATTTGCAAAAGAAATGATTTCTTTCT 2100
Oy 2101 CTAATTTTAAAGCGCTGATATGATGATGATGATGATGATGATGATGATGATGATGAT 2160
Db 2101 CTAATTTTAAAGCGCTGATATGATGATGATGATGATGATGATGATGATGATGATGAT 2160
Oy 2161 CCTGTGCTAATATGATCATATTTGTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2220
Db 2161 CCTGTGCTAATATGATCATATTTGTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2220
Oy 2221 TTTTGTAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 2280
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Oy 2281 GAAATATAGTGCATGTTGTTTGGCCAGTAAAGATGATGATGATGATGATGATGATGAT 2340
Db 2281 GAAATATAGTGCATGTTGTTTGGCCAGTAAAGATGATGATGATGATGATGATGATGAT 2340
Oy 2341 GAGGCGGCGCGGAGACATCCCGCCCTCAGCG 2374
Db 2341 GAGGCGGCGCGGAGACATCCCGCCCTCAGCG 2374

RESULT 2
US-09-347-801-7
Sequence 7, Application US/09347801
GENERAL INFORMATION:
APPLICANT: Allen, Steve
APPLICANT: Lee, Jia Ming
TITLE OF INVENTION: Plant protein kinases
FILE REFERENCE: BB-1171
CURRENT APPLICATION NUMBER: US/09/347, 801
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Db 499 CTGACGAGACATACGATGAGAAATGAGACGTGGCTACGGGTGTATCTATATC 558  
Qy 1299 CTGCTCTGTGGACGTCCGCCATTCTGGCGACGAGAAATCAGAAATATTCGATCTGTG 1358  
Db 559 CTCTCTCTGTGGTGTCTCTCATTTAAACGGAGCAAAATGAAATTTGAAATTAAGAAAGTC 618  
Qy 1359 TTGAGACCTGATCCCACTTGTGATGATTCACCGCTGGCTACAGTATCAGCTAAG 1418  
Db 619 GAGAAAGAAATTCACCTTCGATTTACCAACAGTGGCGTAAGGTTAGCCAGCCACAA 678  
Qy 1419 GATTTTGTGAAGATTTTGTGAACAAGATTACCGCAAAAGATGACCGCTGTCAAGCA 1478  
Db 679 GATTTTATTAAGAAATGTTAGCATGTATGACCTCAATGCGTATATCAGCAAAAGATGCA 738  
Qy 1479 CTGACTCATCCTTGTT 1495  
Db 739 TTAGATCATCATGAT 755

## RESULT 4

US-08-338-057-1

Sequence 1, Application US/08338057

Patent No. 5795741

GENERAL INFORMATION:

APPLICANT: Tomley, Fiona M.  
APPLICANT: Dunn, Paul P. J.  
APPLICANT: Bumstead, Janene M.  
APPLICANT: Vermulen, Arno N.  
TITLE OF INVENTION: Coccidiosis poultry vaccine  
NUMBER OF SEQUENCES: 10  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: Organon Teknika Corporation  
STREET: 1330 Piccard Drive  
CITY: Rockville  
STATE: Maryland  
COUNTRY: U.S.A.  
ZIP: 20850

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/338,057

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: EP 93.309078.9

FILING DATE: 12-NOV-1993

ATTORNEY/AGENT INFORMATION:

NAME: Gormley, Mary E.

REGISTRATION NUMBER: 34,409

TELEPHONE: (301) 258-5200

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 1400 base pairs

TYPE: nucleic acid

STRANDEDNESS: double

TOPOLOGY: linear

MOLECULE TYPE: CDNA to mRNA

HYPOTHETICAL: NO

ANTI-SENSE: NO

FRAGMENT TYPE: C-terminal

ORIGINAL SOURCE:

ORGANISM: Elmeria maxima

STRAIN: Houghton

DEVELOPMENTAL STAGE: sporozoite

IMMEDIATE SOURCE:

LIBRARY: sporozoite cDNA cloned in lambda ZAPIT

CLONE: Em70-1

FEATURE:

NAME/KEY: CDS  
LOCATION: 1..1368  
US-08-338-057-1

Query Match 6.4% Score 153; DB 1; Length 1400;  
Best Local Similarity 52.4%; Pred. No. 3.3e-25;  
Matches 386; Conservative 0; Mismatches 345; Indels 6; Gaps 2;

Qy 759 GCCCTCTCTCAAGAGGCGCGAGTCAAGAGACAGACCGTCCCTCAAGATCATCGCCAA 818  
Db 25 GTCATGTTATGACAGGACGAGATACAGCACAGAAATATGACTAAAGATATATCTAA 84  
Qy 819 GCTAAGATGACAAAGGCAATATCCATTGAGAGATGCTCGTAGAAGATTAATTTTGA 878  
Db 85 CGTCAAGTAAACAGAAAGACAGATTAAGATTTTATTTAAAGAGTTGAATTTATTTT 141  
Qy 879 GCGTTATCAGGACCAATTAATCTGTCAAATTCATATGATGATGATGAGAGTCCCAT 938  
Db 142 AAGAAATTAAGATCATCTTAATATCATGAATTAATGATTTCTTGAGATTAAGATTC 201  
Qy 939 GTCTAATTTGTCATGAAATTAATGATGAGAGAGATTTCTGACAGATTAATTAAGCA 998  
Db 202 TTTTATCTTCTTACAGAAATTAATTAATGATGAGAGAGATTAATTAATTAATTA 261  
Qy 999 GCGGAGATTAACAGAGAGAGATGCAAGGATTTGTCAGATTTTGAAGTTGAGCTAG 1058  
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Qy 1059 GCGTTGTCATCTTCAGGGGTAGTGCATGCTGATTTGAAGCCAGAGATTTCTTTTC 1118  
Db 319 AATTAATGATCATCTTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 378  
Qy 1119 ACACAGGAGTGAAGATGCTCCATGAGTGAATTTGATGATTTGCTGCTGATTTTCA 1178  
Db 379 GAGAAATTAAGAGATGCAATTAATTAATTAATTTTGGGTTATTAATTAATTA 438  
Qy 1179 AGACAGATGAAGGCTTAATGATTTGTTGAGAGTGCATTAATTTGCCCGAGAGTT 1238  
Db 439 GAGCCCAAAAGAGATTAAGATTAATTAATTAATTAATTAATTAATTAATTAATTA 498  
Qy 1239 TTACAGATCATTAATGATGAGAGACAGATTTGAGATTAATTAATTAATTAATTA 1298  
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Qy 1299 CTGCTCTGTGCGCGCATTTCTGGGACGAGAGATTAATTAATTAATTAATTAAT 1358  
Db 559 CTCTCTGTGTTGCTCCCATTTTAACGAGCAATTAATTAATTAATTAATTAATTA 618  
Qy 1359 TTGAGAGCTGATCCCACTTGTGATGATTCACCGGCTACAGTATCAGTGAAGTAA 1418  
Db 619 GAGAAAGAAATTCACCTTCGATTTACCAAGTGGGTTAGGCGCCAGCAAAA 678  
Qy 1419 GATTTTGTGAAGATTTTGTGAACAAGATTACCGCAAAAGATGACCGCTGTTCAGCA 1478  
Db 679 GATTTTATTAAGAAATGTTAGCATGTATGACCTCAATGCGTATATCAGCAAAAGATGCA 738  
Qy 1479 CTGACTCATCCTTGTT 1495  
Db 739 TTAGATCATCATGAT 755

## RESULT 5

US-08-668-416-1

Sequence 1, Application US/08668416

Patent No. 5843722

GENERAL INFORMATION:

APPLICANT: Tomley, Fiona M.

APPLICANT: Dunn, Paul P. J.

APPLICANT: Bumstead, Janene M.

APPLICANT: Vermulen, Arno N.

TITLE OF INVENTION: Coccidiosis poultry vaccine

NUMBER OF SEQUENCES: 10

CORRESPONDENCE ADDRESS:

```

1 ADDRESS: Akzo No. 5843722el Patent Department
2 STREET: 1300 Piccard Drive, Suite 206
3 City: Rockville
4 STATE: Maryland
5 COUNTRY: U.S.A.
6 Zip: 20850
7
8 COMPUTER READABLE FORM:
9 MEDIUM TYPE: Floppy disk
10 COMPUTER: IBM PC compatible
11 OPERATING SYSTEM: PC-DOS/MS-DOS
12 SOFTWARE: Patent Release #1.0, Version #1.25
13
14 CURRENT APPLICATION DATA:
15 APPLICATION NUMBER: US/08/568,416
16
17 FILING DATE:
18 CLASSIFICATION:
19 PRIOR APPLICATION DATA:
20 APPLICATION NUMBER: US/08/464,164
21 FILING DATE: June 2, 1995
22 ATTORNEY/AGENT INFORMATION:
23 NAME: Gormley, Mary E.
24 REGISTRATION NUMBER: 34,409
25 TELECOMMUNICATION INFORMATION:
26 TELEPHONE: (301) 258-5200
27 INFORMATION FOR SEQ. ID NO. 1:
28
29 SEQUENCE CHARACTERISTICS:
30 LENGTH: 1400 base pairs
31
32 TYPE: nucleic acid
33 STRANDEDNESS: double
34 TOPOLOGY: linear
35 MOLECULE TYPE: cDNA to mRNA
36 HYPOTHETICAL: NO
37 ANTI-SENSE: NO
38
39 FRAGMENT TYPE: C-terminal
40 ORIGINAL SOURCE:
41 ORGANISM: Eimeria maxima
42 STRAIN: Houghton
43 DEVELOPMENTAL STAGE: sporozoite
44 IMMEDIATE SOURCE:
45 LIBRARY: sporozoite cDNA cloned in Lambda ZapIII
46 CLONE: Em70-1
47
48 FEATURE:
49 NAME/KEY: CDS
50 LOCATION: 1..1368
51
52 US-08-668-416-1

```

NAME: Spruill, W. Murray  
REGISTRATION NUMBER: 32,943  
REFERENCE/DOCKET NUMBER: S-18805/A/CCG 1577/CIP  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8615  
TELEFAX: (919)541-8689  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1349 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: cDNA  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 3..1226  
OTHER INFORMATION: /note= "cDNA sequence for maize  
OTHER INFORMATION: pollen-specific calcium dependent protein kinase gene as  
OTHER INFORMATION: disclosed in Figure 30."  
US-07-951-715A-20

Query Match 6.48; Score 151.6; DB 1; Length 1349;  
Best Local Similarity 53.98; Pred. No. 6,7e-25;  
Matches 335; Conservative 0; Mismatches 284; Indels 3; Gaps 1;

QY 883 TATCAGGCGACAAATATCTGCTCAAAATTCATGATGATGATGAGGATGGCTCATATGCT 942  
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QY 943 ACATTTGATGATGATTTATGAGGAGAGAGATTTGCTAGACAGATTTAGCCAGAGCGC 1002  
DB 79 ACCTGCTATGAGACTGTCCGCGCGGAGAGCTCTTCGACCGATCATCGCCGCGGCGC 138  
QY 1003 GGAGATACACAGAGAGAGATGCCAAGCGATTTGTTAGAGATTTTGAAGGCTAGTACCT 1062  
DB 139 AG---TACACGAGACGGCGCGCGCGAGCTGCTCGCGCGCTGCTGATGATGATGATGAT 195  
QY 1063 TCTGTATCTTTCAGAGGAGTATGATGATGATGATGATGATGATGATGATGATGATGAT 1122  
DB 196 CTTGCTCATCTGATGAGGAGTATGATGATGATGATGATGATGATGATGATGATGATGAT 255  
QY 1123 CCAGGATGAGAAATGCTCCATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1182  
DB 256 GCAGAGGAGAGAGAGCGCGCGCTCAAGGCCACGACTTTCGCTCTCTCTCTCTCTCTCA 315  
QY 1183 CAGATGAAAGCTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1242  
DB 316 AGGCGAGCTGCTCAGGAGATGCTGCGCGCGCTACTACATGCGCGCGAGGCTGCTCA 375  
QY 1243 ACAGATCATATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1302  
DB 376 AGAGAGAGTACGCGCGCGAGGCGAGCATCTGCGCGCTGCTGCTGCTGCTGCTGCTGCT 435  
QY 1303 TCTGTGAGCTGCGCGCTGCTGCGCGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAT 1422  
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QY 1363 GAGCTGATCCCAATTTGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1422  
DB 496 GAGCGAGCTGCTGCTGCTGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGAT 555  
QY 1423 TTGTGAAGAGATTTGAGAGAGAGAGATTTACCGAGAGAGAGAGAGAGAGAGAGAGAT 1482  
DB 556 TCGTCAAGAGAGATGCTCAACATCAACCCAGAGAGAGGCTGCTGCTGCTGCTGCTGCTGCT 615  
QY 1483 CTTCATCTTGTGTGAGAGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 1504  
DB 616 ATCACCACATGATCAAGAGAGA 637

RESULT 7  
US-08-459-448A-20

Sequence 20, Application US/08459448A  
Patent No. 5859336  
GENERAL INFORMATION:  
APPLICANT: Koziel, Michael G.  
APPLICANT: Desai, Nalin M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Martha S.  
APPLICANT: Merlin, Ellis J.  
APPLICANT: Launis, Karen L.  
APPLICANT: Rothenstein, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John L.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Suttle, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: NO. 5859336artis Corporation  
STREET: Patent & Trademark Dept., 520 White Plains  
CITY: Tarrytown  
STATE: New York  
COUNTRY: USA  
ZIP: 10591-9005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,448A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Pace, Gary M.  
REGISTRATION NUMBER: 40403  
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIVA  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8582  
TELEFAX: (919)541-8689  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 1349 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: cDNA  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 3..1226  
OTHER INFORMATION: /note= "cDNA sequence for maize  
OTHER INFORMATION: pollen-specific calcium dependent protein kinase gene as  
OTHER INFORMATION: disclosed in Figure 30."  
US-08-459-448A-20

Query Match 6.48; Score 151.6; DB 2; Length 1349;  
Best Local Similarity 53.98; Pred. No. 6,7e-25;  
Matches 335; Conservative 0; Mismatches 284; Indels 3; Gaps 1;  
QY 883 TATCAGGCGACAAATATCTGCTCAAAATTCATGATGATGATGAGGATGGCTCATATGCT 942

```

Db 19 TCTCCGGCCAGCCCAAGCTGTGGGCTCCGCGCGCTACGAGGACAAGCAGAGCGTGC 78
QY 943 ACATTTCATGATATATGAGGAGAGAAATTCCTAGACAGAAATTTAGCCAGAGCG 1002
Db 79 ACCTGCTCATGGAGCTGTGGCGGGGAGAGCTTTCGCCCATCATCGCCGGGGCC 138
QY 1003 GGAGATACACAGAGAAATGCCAAGCGATTTGTACAGATTTTGAGGAGTACGCT 1062
Db 139 AG---TACACGGAGCGCGCGCGCGAGCTGCTGCGCGCATCGACATGTCGACA 195
QY 1063 TCTGTATCTTTCAGGGGAGTGCATCGTGAATTTGAAAGCCAGAAATTTCTTTTCA 1122
Db 196 CCGTCCACTCCATGGGGGTGATGTCACCGGACATCAAGCCGAGAACTTCTCTCTCA 255
QY 1123 CCAGGATGAAATGCTCCCATGAATGTTATTTTGGTCTCTGATTTTATTAAGAC 1182
Db 256 GCAAGGACGAGGAGCGCGCTCAAGCCACCGACTCGCTCTCTCTTCAAGG 315
QY 1183 CAGATGAAAGGCTTAATGATATTTGGAAGTGCATATTATTTGGCCCGAGAGTTTAC 1242
Db 316 AGGCGCAGCTGCTCAGGAGCATGTGGCGCGCTACTACTATCGCGCCGAGAGTCTCA 375
QY 1243 ACAGATCATATAGTATGGAAGACAGACATTTGAGTATAGTGTCAATACGTACATTC 1302
Db 376 AGAGGAAGTACGCGCGCGAGCGCATCTGAGCGTGGCGTCTGATCTTCACTTCC 435
QY 1303 TCTGTGGCATCGGCAATCTGTGGGACAGAAACAAATCAGAAATTCCTGTGTGGA 1362
Db 436 TCCGCGCGCTGCTCTCTTGGGAGAGAACGACATCTTCCCGCATCTTCC 495
QY 1363 GACCTATCCCACTTTGATGATTTACCGTGGCTACAGTATAGCTGAAGTAAAGATT 1422
Db 496 GAGGCGAGCTGACCTCTCTCCAGGAGCATGCGCACACATCTGCGGAGCCAAAGATC 555
QY 1423 TTGTGAAGATTTCGAACAAAGATTACCGCAAAAGATGACCGTGTTCGAACATGTA 1482
Db 556 TCGTCAAGAAAGATGCTCAACATCAACCCCAAGAGCGGCTCAGGCTCTCA 615
QY 1483 CTCATCTTGTGTCGAGATGA 1504
Db 616 ATCACCATTGATCAAGAAGA 637

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## RESULT 8

Sequence 20, Application US/08459595A  
Patent No. 6018104

## GENERAL INFORMATION:

APPLICANT: Koziel, Michael G.  
APPLICANT: Desai, Nalini M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Martha S.  
APPLICANT: Merlino, Ellis J.  
APPLICANT: Launis, Karen L.  
APPLICANT: Rothstein, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John L.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Suttie, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: NO. 6018104artis Corporation  
STREET: Patent & Trademark Dept., 520 White Plains  
STREET: Rd., POB 2005  
CITY: Tarrytown

```

STATE: New York
COUNTRY: USA
ZIP: 10591-9005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,595A
FILING DATE: 02-JUN-1995
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Pace, Gary M.
REGISTRATION NUMBER: 40403
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIV3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8582
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 1349 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
FEATURE:
NAME/KEY: CDS
LOCATION: 3..1226
OTHER INFORMATION: /note="cDNA sequence for maize
OTHER INFORMATION: pollen-specific calcium dependent protein kinase gene as
OTHER INFORMATION: disclosed in Figure 30."
US-08-459-595A-20

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Query Match 6.4%; Score 151.6; DB 3; Length 1349;

Best Local Similarity 53.9%; Pred. No. 6.7e-25;

Matches 335; Conservative 0; Mismatches 284; Indels 3; Gaps 1;

```

QY 883 TATCAGGGCAATPAATCTCTCAAAATCTATGATGATGAGATGCGCTCATGTCT 942
Db 19 TCTCCGGCCAGCCCAAGCTGTGGGCTCCGCGCGCTACGAGGACAAGCAGAGCGTGC 78
QY 943 ACATTTCATGATATATGAGGAGAGAAATTCCTAGACAGAAATTTAGCCAGAGCG 1002
Db 79 ACCTGCTCATGGAGCTGTGGCGGGGAGAGCTTTCGCCCATCATCGCCGGGGCC 138
QY 1003 GGAGATACACAGAGAAATGCCAAGCGATTTGTACAGATTTTGAGGAGTACGCT 1062
Db 139 AG---TACACGGAGCGCGCGCGAGCTGCTGCGCGCATCGACATGTCGACA 195
QY 1063 TCTGTATCTTTCAGGGGAGTGCATCGTGAATTTGAAAGCCAGAAATTTCTTTTCA 1122
Db 196 CCGTCCACTCCATGGGGGTGATGTCACCGGACATCAAGCCCGAGAACTTCTCTCTCA 255
QY 1123 CCAGGATGAAATGCTCCCATGAATGTTATTTTGGTCTCTGATTTTATTAAGAC 1182
Db 256 GCAAGGACGAGGAGCGCGCTCAAGCCACCGACTCGCTCTCTTCAAGG 315
QY 1183 CAGATGAAAGGCTTAATGATATTTGGAAGTGCATATTATTTGGCCCGAGAGTTTAC 1242
Db 316 AGGCGCAGCTGCTCAGGAGCATGTGGCGCGCTACTACTATCGCGCCGAGAGTCTCA 375
QY 1243 ACAGATCATATAGTATGGAAGACAGACATTTGAGTATAGTGTCAATACGTACATTC 1302
Db 376 AGAGGAAGTACGCGCGCGAGCGCATCTGAGCGTGGCGTCTGATCTTCACTTCC 435

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QY 1303 TCTGTGCGAGTCCGACATCTTGGGCAAGAACATCAGATATTTCCATCTGTGTGA 1362
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 436 TCGCCGGCGTCCCTCCCTTTTGGGCAAGAACATCAGATCTTCCACCGCATCTGC 495
QY 1363 GAGCTGATCCCACTTTGATGATTCACCGTGCCTACAGTATCAGCTGAAGGAT 1422
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 496 GAGGGCGAGCTTGACCTCTCCAGCGACCATMGCCACATCTCCCGGAGCCAAAGATC 555
QY 1423 TTGTGAAGAGATTCTGAGCAAGATTAACCGCAAAAGATGACCGCTGTCAAGCATGA 1482
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 556 TCCTCAAGAAAGATGCTCAACATCAACCCCAAGAGAGCGCTCACGGCTTCCAGTCTCA 615
QY 1483 CTCATCTTGGTTGCGAGATGA 1504
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 616 ATCACCATGATCAAGAAGA 637

```

```

RESULT 9
US-08-459-504B-20
Sequence 20, Application US/08459504B
GENERAL INFORMATION:
APPLICANT: Kozziel, Michael G.
APPLICANT: Desai, Nalini M.
APPLICANT: Lewis, Kelly S.
APPLICANT: Kramer, Vance C.
APPLICANT: Warren, Gregory W.
APPLICANT: Evola, Stephen V.
APPLICANT: Crossland, Lyle D.
APPLICANT: Wright, Martha S.
APPLICANT: Merlin, Ellis J.
APPLICANT: Launis, Karen L.
APPLICANT: Rohnstein, Steven J.
APPLICANT: Bowman, Cindy G.
APPLICANT: Dawson, John L.
APPLICANT: Dunder, Erik M.
APPLICANT: Pace, Gary M.
APPLICANT: Suttie, Janet L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6075185artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,504B
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/459,595
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Weigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: CG1577/CIP/DIV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 20:

```

```

SEQUENCE CHARACTERISTICS:
LENGTH: 1349 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
FEATURE:
NAME/KEY: CDS
LOCATION: 3..1226
OTHER INFORMATION: /note="cDNA sequence for maize
OTHER INFORMATION: pollen-specific calcium dependent protein kinase gene as
OTHER INFORMATION: disclosed in Figure 30."
US-08-459-504B-20

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Query Match
Best Local Similarity 53.9%; Score 151.6; DB 3; Length 1349;
Matches 335; Conservative 0; Mismatches 284; Indels 3; Gaps 1;

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QY 883 TATCAGGCGACAAATTAATCTGCAATTTCTATGATGATGAGGATGGCCATCTCT 942
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 19 TCTCCGGCCAGCCCAACGCTGTGGCTCCGCGCCGTACAGAGACAGACCGTGC 78
QY 943 ACAATTGATGATTAATGATGAGGAGAGAAATGCTACAGAAATTAATGACGAGCG 1002
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 79 ACCCTGCTATGAGAGCTGTGCGGGGGGAGAGCTCTTGACCGCATATCGCCGGGCGC 138
QY 1003 GCAGATACACAGAGAGAGATGCAAAAGCATGTTGTACAGATTTTGACGCTAGCT 1062
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 139 AG---TACACGAGAGCGCGCGCGCGGAGCTGTCCGCCCATCTGAGATCGGCACA 195
QY 1063 TCTGTATCTTGAAGGGGATGATGATGATGATGATGATGATGATGATGATGATG 1122
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 196 CCGTCCACTCCATGGGGGATGATGATGATGATGATGATGATGATGATGATGATG 255
QY 1123 CCAGGATGAAAGATGCTCCCATGAAGTGAATTTGTTGTTCTCTGATTTCAATGAC 1182
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 256 GCAAGAGCAGAGAGCGCGCGCTCAAGGCGACCATTTGCGCTCTCTCTCTCAAGG 315
QY 1183 CAGATGAAGGCTTAATGATTAATGATGATGATGATGATGATGATGATGATGATG 1242
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 316 AGGCGAGAGCTGCTCAGGACATCGTGGGACGCTACTATGATGATGATGATGATG 375
QY 1243 ACAGATCAATAGTATGAGACAGACATTTGAGATGATGATGATGATGATGATGAT 1302
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 376 AGAGAGATGAGGCGCGCGGAGGCGGACATGAGCGTGGGCTGATCTCTACATCTTCC 435
QY 1303 TCTGTGCGAGTCCGACATCTTGGGCAAGAACATCAGATATTTCCATCTGTGTGA 1362
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 436 TCGCCGGCGTCCCTCCCTTTTGGGCAAGAACATCAGATCTTCCACCGCATCTGC 495
QY 1363 GAGCTGATCCCACTTTGATGATTCACCGTGCCTACAGTATCAGCTGAAGGAT 1422
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 496 GAGGGCGAGCTTGACCTCTCCAGCGACCATMGCCACATCTCCCGGAGCCAAAGATC 555
QY 1423 TTGTGAAGAGATTCTGAGCAAGATTAACCGCAAAAGATGACCGCTGTCAAGCATGA 1482
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 556 TCCTCAAGAAAGATGCTCAACATCAACCCCAAGAGAGCGCTCACGGCTTCCAGTCTCA 615
QY 1483 CTCATCTTGGTTGCGAGATGA 1504
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 616 ATCACCATGATCAAGAAGA 637

```

```

RESULT 10
US-08-459-444-20
Sequence 0, Application US/08459444A
Patent No. 6121014
GENERAL INFORMATION:
APPLICANT: Kozziel, Michael G.
Desai, Nalini M.
Lewis, Kelly S.
Kramer, Vance C.

```



Warren, Gregory W.  
Evola, Stephen V.  
Crossland, Lyle D.  
Wright, Martha S.  
Merlin, Ellis J.  
Lauais, Karen L.

TITLE OF INVENTION: METHOD FOR PRODUCING A PLANT-OPTIMIZED  
NUCLEIC ACID CODING SEQUENCE

NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 6121014artis Agribusiness Biotechnology Research, Inc.  
STREET: 3054 Cornwallis Road  
CITY: Research Triangle Park  
STATE: NC  
COUNTRY: USA  
ZIP: 27709

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,444A  
FILING DATE: 02-Jun-1995  
CLASSIFICATION: <Unknown>  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991

ATTORNEY/AGENT INFORMATION:  
NAME: Meigs, J. Timothy  
REGISTRATION NUMBER: 38,241  
REFERENCE/DOCKET NUMBER: S-18805/PL/CGL1577/CIP/DIV6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8587  
TELEFAX: (919)541-8689

INFORMATION FOR SEQ ID NO: "note" "cDNA sequence for maize  
pollen-specific calcium dependent protein kinase gene as  
disclosed in Figure 30."

SEQUENCE CHARACTERISTICS:  
LENGTH: 1349 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: cDNA  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: CDS  
LOCATION: 3..1226  
SEQUENCE DESCRIPTION: SEQ ID NO: 20:  
US-08-459-444-20

Query Match 6.4%; Score 151.6; DB 3; Length 1349;  
Best Local Similarity 53.9%; Pred.No. 6.7e-25;  
Matches 335; Conservative 0; Mismatches 284; Indels 3; Gaps 1;

QY 883 TATCAGGCGCATATATCTGCTCAATTTCTATGATGATGAGATGGCCTCAATGCTT 942  
DB 19 TCTCCGCGCCAGCCCAACGTGTGGGCTCGCGCGGTGACAGACAAAGAGCGTGC 78  
QY 943 ACATTTGATGATATGAGGAGAGAGATTGCTAGACAGATATTAGCCAGAGCG 1002  
DB 79 ACCTGCTGATGAGCTGTGTGGCGGGGAGAGCTCTTCGACCCCATCATGCCCCGGGGCC 138  
QY 1003 GGAGATACAGAGAGAGATGCAAGCGATTGTTGACAGATTTTGAGCGTAGAGCTT 1062  
DB 139 AG--TACAGGAGCGCGCGCGAGAGCTGTGCGCGGCATCGACATGCGAGCA 195  
QY 1063 TCTGTATCTTCAGGGGAGTGTGATGATTTGAAGCCAGAGATTTCTTTACAA 1122  
DB 196 CCGCCATCTCATGGGGGTGATGTCACCGGAGCATCAAGCCGAGAACTTCTGCTGCTCA 255

QY 1123 CCAGGATGAAATGCTCCCATGAGTTGATTTGGTCTCTGTGATTTTCATTAGAC 1182  
DB 256 GCAAGGACGAGAGCGGCCCTCAAGCCAGCATTGGCCTCTCGCTTTTCAAGG 315  
QY 1183 CAGATGAAGCCTTAATGATATTTGTTGAAGTGCATATTATGTTGCCCGAGAGTTTAC 1242  
DB 316 AGGCGAGCTGCTCAGGAGACATGCTCGCGAGCCCTACTACATCGCGCCGAGGTCTCA 375  
QY 1243 ACAGATCATATGATGAGAGACATTTGAGTATAGTGTGATACACTATATCTG 1302  
DB 376 AGAGGAAGTACGCCCCGAGGCGGACATCTGAGCGCTGATCTCTACATCTTCC 435  
QY 1303 TCTGTGGCAGTCGCCATTCTGTGGGACGAGAACATCAGAAATTCGATCTGTGTTGA 1362  
DB 436 TCGCCGCGCTGCTCTCTTCTGTGGGACAGAGACGAGCATCTTACCGCATCTG 495  
QY 1363 GAGCTGATCCCACTTTGATGATTCACCGTGGCTACAGTATGAGTGAAGTAT 1422  
DB 496 GAGGAGAGCTTGACCTCTCCAGGAGCCATGCGCACATCTGCGGGAGCAAGATC 555  
QY 1423 TTGTGAAGATTTTCGAAACAAGATTACCGCAAAAGATGACCGCTGTTCAAGCACTGA 1482  
DB 556 TCGTCAAGAGATCTCAACATCAACCCCAAGAGGCGGTCAAGGGGTTCCAGTCTCA 615  
QY 1483 CTCATCCTTGTTGCGAGATGA 1504  
DB 616 ATCACCATGATCAAGAAGA 637

RESULT 11  
US-09-547-422-20  
Sequence 0, Application US/09547422  
Patent No. 6320100  
GENERAL INFORMATION:  
APPLICANT: Kozieł, Michael G.  
Desai, Nalin M.  
Lewis, Kelly S.  
Kramer, Vance C.  
Warren, Gregory W.  
Evola, Stephen V.  
Crossland, Lyle D.  
Wright, Martha S.  
Merlin, Ellis J.  
Lauais, Karen L.

TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
INSECTICIDAL ACTIVITY IN MAIZE

NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 6320100artis Agribusiness Biotechnology Research, Inc.  
STREET: 3054 Cornwallis Road  
CITY: Research Triangle Park  
STATE: NC  
COUNTRY: USA  
ZIP: 27709

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentln Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/547,422  
FILING DATE: 11-Apr-2000  
CLASSIFICATION: <Unknown>  
PRIORITY APPLICATION DATA:  
APPLICATION NUMBER: US 08/459,595  
FILING DATE: 02-JUN-1995  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991

ATTORNEY/AGENT INFORMATION:  
NAME: Meigs, J. Timothy  
REGISTRATION NUMBER: 38,241

RESULT 12  
US-09-347-801-5  
; Sequence 5, Application US/09347801  
; Patent No. 6262345

OY	465	CCGCGCCGGCCAGAGGTGCAGGCCCAAGAGGTTCTTTCACGGGCCGTTCCCGCGCCGTG	52
Db	55	CCTTAGCAGCGTTCANTCAACACCCCTTGCGATCTTTCACAGNCCCCTTCCCTCGGCCCT	114
OY	525	CCGCGCCAAAGCACATAAAGGCCACGCTCCGCCAAGAAGGTGGGTGGGGGAAGCCAAAGAA	584
Db	115	CCGGCCAAAGACATTTCGGCGCGTGGTCCCGCCAGCCAGCGTTCCGTCAAGCCGAACAA	174
OY	585	GGGACGATTCGGGAGAGGAGAGCGCTGGGCGCTGGCGCGGCGGCGTGAAGGGCGCGGAT	644
Db	175	GCCTCATACCGGAGGCCAGC-----	195
OY	645	GGGCGGAACGGAAGAGGCCATTGGACAAAGACGTTGCGGGTCTCCGAAGAACTTCGGGCGG	704
Db	196	-----NAETGTGACTCTGGCGCTCGACAAGAAGCTTTGGCTTGTCTTAAGCAGTTTTGGCT	249
OY	705	AAGTACGAGCTTGGGAAGAGGTGGGGAAGGGGCCACTTCGACACACTTGTCCGCGCTC	764
Db	250	CATTATGAGCTCACTGACGAGAGNGGCGCGGGGCGCATTTTGGGTATACCTGGCTCGGCTAAA	309
OY	765	GTCAAAGGCGGANTTACAAGGGAACAACCGTGGCCGCTCAAGATATATGCCCAAAGCTTAAG	824

Db 310 GCCAAGAAAGGGCGCTTCAAGGCTTAAATGTCCTGCTCAAGTCATTCCTAAGCCAAAG 369  
QY 825 ATGACAAGCGCATATTCATGATGATGTTCTGATAGAGTAATAAATTTTGAGAGCGTTA 884  
Db 370 ATGACCACAGCAATTCCTATAGAGATGTAAGAGAGTAAGATATTTAGAGGCTTTA 429  
QY 885 TCAGGGCACAATATCTCTCAATTCATATGATGATGATGAGATGAGCTTCATCTCTAC 944  
Db 430 ACAGGACATAGAGATCTGTCATTCATGAAAGCTATGAAATGATGAC-ATGTTTAT 488  
QY 945 ATTTCATGGAATTTATGATGAGGAGAGAAATTCCTATGACAGAAATTTAGCCAGAGCGG 1004  
Db 489 ATAGT-TTTGAGTTTGCAAGGAGGCGGAATTCCTAGATAGATCTTCCGGGCTGGA 547  
QY 1005 AGATCACAGAG 1016  
Db 548 AGTACTCGNAG 559

## RESULT 13

US-08-459-448A-26  
Sequence 26, Application US/08459448A

Patent No. 5859336

## GENERAL INFORMATION:

APPLICANT: Kozziel, Michael G.  
APPLICANT: Desai, Nalin M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Marsha S.  
APPLICANT: Merlin, Ellis J.  
APPLICANT: Launis, Karen L.  
APPLICANT: Rothschild, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John L.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Suttie, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 5859336artis Corporation  
STREET: Patent & Trademark Dept., 520 White Plains  
STREET: Rd., POB 2005  
CITY: Tarrytown  
STATE: New York  
COUNTRY: USA  
ZIP: 10591-9005  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,448A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Pace, Gary M.  
REGISTRATION NUMBER: 40403  
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIV4  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8582  
TELEFAX: (919)541-8689

INFORMATION FOR SEQ ID NO: 26:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 4162 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: DNA (genomic)  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: misc\_feature  
LOCATION: 1418..1427  
OTHER INFORMATION: /note="start of mRNA"  
FEATURE:  
NAME/KEY: exon  
LOCATION: 1481..2366  
FEATURE:  
NAME/KEY: intron  
LOCATION: 2367..2451  
FEATURE:  
NAME/KEY: exon  
LOCATION: 2452..2602  
FEATURE:  
NAME/KEY: intron  
LOCATION: 2603..2690  
FEATURE:  
NAME/KEY: exon  
LOCATION: 2691..2804  
FEATURE:  
NAME/KEY: intron  
LOCATION: 2805..2906  
FEATURE:  
NAME/KEY: exon  
LOCATION: 2907..3075  
FEATURE:  
NAME/KEY: intron  
LOCATION: 3076..3177  
FEATURE:  
NAME/KEY: exon  
LOCATION: 3178..3304  
FEATURE:  
NAME/KEY: intron  
LOCATION: 3305..3398  
FEATURE:  
NAME/KEY: exon  
LOCATION: 3399..3498  
FEATURE:  
NAME/KEY: intron  
LOCATION: 3499..3713  
FEATURE:  
NAME/KEY: exon  
LOCATION: 3714..3811  
FEATURE:  
NAME/KEY: promoter  
LOCATION: 1..1477  
IDENTIFICATION METHOD: experimental  
OTHER INFORMATION: /partial  
OTHER INFORMATION: /function="pollen-specific promoter region"  
OTHER INFORMATION: /evidence=EXPERIMENTAL  
US-08-459-448A-26  
Query Match 6.0%; Score 143; DB 2; Length 4162;  
Best Local Similarity 53.6%; Pred. No. 9.2e-23;  
Matches 349; Conservative 0; Mismatches 290; Indels 12; Gaps 2;  
QY 680 CGGGTTCGAGCACTTGGCGCGGAGTACGAGCTCGGGAGAGAGTGGAGGCGCA 739  
Db 1729 CCGGCCATGAGAGAGAGCTGGCGCGAGCTGATGAGGCAAGAGACTCGGGCGGCGCA 1788  
QY 740 CTTCGACACACTTCTCCGCCCTGCTCAAGAAGGCGGAGTACAAAGGACACACCTGCG 799  
Db 1789 GTTCGGCGTGCACGACACTGTGCAAGCAGCAGGAGAGAGC-----GGCGAGAGCTGCG 1839  
QY 800 CGTCAAGATCATGCGCAAGCTAAGATGACAAAGCAATATCCATTGAGAGATGTCGTAG 859

Db 1840 GTGCAGACGATCGCGAAGCGAGCTGGCCGCCAGGAGAGACTGGACACGCTGCCGCC 1899  
Qy 860 AGAAGTAAATTTTGGAGAGCGTTATCAGGGCACAATATCTGCTCAATTTATATGATGC 919  
Db 1900 GGAGGTGAGATCATGACACCACTCTCCGGCCACCCACAGTGTGGGCTCCCGCGCGC 1959  
Qy 920 ATGTAGAGATGGCTCATATGCTATGTCATGGAATTTATGAGGAGAGAAATGCT 979  
Db 1960 GTAGAGAGACAGACAGACCGCTGCACCTGCTCATATGAGACTGTCCCGGGCGGAGCTCTT 2019  
Qy 980 AGACAGAAATTTAGCCAGAGCGGGAGATACACAGAGAAAGATGCCAAGCGATTGTTGT 1039  
Db 2020 CGACCGCATATCGCCGGGGCCAG--TACACGAGCGCGGGCGCCCGGAGCTGCTGCG 2076  
Qy 1040 ACATATTTAGCGCTATAGCTTCTGTCTGTCTTACAGGGGTAGTGCATGCTGATTTGAA 1099  
Db 2077 CGCCATGTCAGATCTGACACACTCTCCACTCCATGGGGTGTATGCACCGGACATCAA 2136  
Qy 1100 GCCAGAAATTTCTTTTACACACAGAGGAAATGCTCCCATGAATGATGATTT 1159  
Db 2137 GCCGAGAACTTCTCTGCTGCTCAGCAAGAGAGAGCGCCGCTCAAGCCACCGACTT 2196  
Qy 1160 TGGTCTCTGATTTTCAATGACCAAGTAAAGCTTAATGATTTGTTGAAGTGCATA 1219  
Db 2197 CGGCTCTCCGCTTCTTCAAGAGAGGCGAGCTGCTCAGGACATCGTCGACAGCGCTA 2256  
Qy 1220 TTATGTTGCCCCAGAGGTTTACACAGATCATATAGTATGGAAGCAACATTTGGAGTAT 1279  
Db 2257 CTACATCGCCCGGAGGTGCTCAAGAGAAAGTACGGCCCGGAGCGCCACATCTGAGACCT 2316  
Qy 1280 AGGTGTCATACGATTCCTGCTGTGTGCGCATCGGCCATTCGCGGACG 1330  
Db 2317 CGGCGTCATGCTCATATCTTCTCCGCCGCGGCTCCCTTCTGGGCAAG 2367

## RESULT 14

US-08-459-595A-26

Sequence 26, Application US/08459595A

Patent No. 6018104

## GENERAL INFORMATION:

APPLICANT: Kozziel, Michael G.  
APPLICANT: Desai, Nalini M.  
APPLICANT: Lewis, Kelly S.  
APPLICANT: Kramer, Vance C.  
APPLICANT: Warren, Gregory W.  
APPLICANT: Evola, Stephen V.  
APPLICANT: Crossland, Lyle D.  
APPLICANT: Wright, Martha S.  
APPLICANT: Launis, Karen L.  
APPLICANT: Rothelein, Steven J.  
APPLICANT: Bowman, Cindy G.  
APPLICANT: Dawson, John L.  
APPLICANT: Dunder, Erik M.  
APPLICANT: Pace, Gary M.  
APPLICANT: Suttle, Janet L.  
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 6018104artis Corporation  
STREET: Patent & Trademark Dept., 520 White Plains  
CITY: Tarrytown  
STATE: New York  
COUNTRY: USA  
ZIP: 10591-9005

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,595A  
FILING DATE: 02-JUN-1995  
CLASSIFICATION: 800  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Pace, Gary M.  
REGISTRATION NUMBER: 40403  
REFERENCE/DOCKET NUMBER: CGC 1577/CIP/DIV3  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8582  
TELEFAX: (919)541-8689  
INFORMATION FOR SEQ. ID NO: 26:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 4162 base pairs  
TYPE: nucleic acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: DNA (genomic)  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: misc-feature  
LOCATION: 1418..1427  
OTHER INFORMATION: /note="start of mRNA"  
FEATURE:  
NAME/KEY: exon  
LOCATION: 1481..2366  
FEATURE:  
NAME/KEY: intron  
LOCATION: 2367..2451  
FEATURE:  
NAME/KEY: exon  
LOCATION: 2452..2602  
FEATURE:  
NAME/KEY: intron  
LOCATION: 2603..2690  
FEATURE:  
NAME/KEY: exon  
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FEATURE:  
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FEATURE:  
NAME/KEY: exon  
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FEATURE:  
NAME/KEY: promoter  
LOCATION: 1..1477  
IDENTIFICATION METHOD: experimental  
OTHER INFORMATION: /partial

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OTHER INFORMATION: /function= "pollen-specific promoter region"
OTHER INFORMATION: /evidence= EXPERIMENTAL
US-08-459-504B-26

Query Match      6.0%; Score 143; DB 3; Length 4162;
Best Local Similarity 53.6%; Pred. No. 9,2e-23;
Matches 349; Conservative 0; Mismatches 290; Indels 12; Gaps 2;

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    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 1729 CGGGCCCATGAGAGCTCGGCGGAGCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 1788
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DB 1789 GTTCGGCGTACGACCTGTGACGACCGGAGCAGC-----GGCGAGAACTGGC 1839
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QY 800 CGTCAAGATCATCGCCAAAGCTAAGTACACAGCGCAATATCCATGAGATTTCTGTAG 859
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QY 860 AGAAGTAAATTTTGTAGAGCGTTATCAGGGCACAATTAATCTGTCAAAATTTATGTC 919
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    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
QY 920 ATGTGAGATGCGCTCAATGTCTACATTTGTATGAGATTAATGTAGGAGAGAAATTTGCT 979
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QY 980 AGCACAATATTAGCCAGAGGCGGAGATACACAGAGAAAGATGCCAAGCGATTGTGT 1039
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QY 1160 TGTCTCTCTGATTTTATGACACAGATGAAGGCTTAATGATATTTTGTGAGATGATA 1219
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QY 1220 TTATGTTGCCCGAGAGTTTACACAGATCATATAGTATGAGAGACATTTGAGATAT 1279
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DB 2257 CTACATCGCCCGGAGGTGCTCAAGAGAGTACGCGCGGAGCGCACATCTGGAGCGT 2316
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RESULT 15
US-08-459-504B-26
Sequence 26, Application US/08459504B
Patent No. 6075185
GENERAL INFORMATION:
APPLICANT: kozziel, Michael G.
APPLICANT: Desai, Nalin M.
APPLICANT: Lewis, Kelly S.
APPLICANT: Kramer, Vance C.
APPLICANT: Warren, Gregory W.
APPLICANT: Evola, Stephen V.
APPLICANT: Crossland, Lyle D.
APPLICANT: Wright, Martha S.
APPLICANT: Merlin, Ellis J.
APPLICANT: Launis, Karen L.
APPLICANT: Rothstein, Steven J.
APPLICANT: Bowman, Cindy G.
APPLICANT: Dawson, John L.
APPLICANT: Dunder, Erik M.
APPLICANT: Pace, Gary M.
```

```
APPLICANT: Suttie, Janet L.
TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED
TITLE OF INVENTION: INSECTICIDAL ACTIVITY IN MAIZE
NUMBER OF SEQUENCES: 94
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6075185artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: NC
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,504B
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/459,595
FILING DATE: 02-JUN-1995
APPLICATION NUMBER: US 07/951,715
FILING DATE: 25-SEP-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/772,027
FILING DATE: 04-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: Weigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: CGC1577/CIP/DIV
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919)541-8587
TELEFAX: (919)541-8689
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
LENGTH: 4162 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
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US-08-459-504B-26

Query Match 6.0%; Score 143; DB 3; Length 4162;  
Best Local Similarity 53.6%; Pred. No. 9.2e-23;  
Matches 349; Conservative 0; Mismatches 290; Indels 12; Gaps 2;

QY 680 CGGGTTCTCGAAGAACTTCGGCCGCAAGTACGAGCTCGGGAAGAGTGGGAGGCGCA 739  
DB 1729 CCGGCCCATGAGAGACGTGCGCGCACTACTGATGGCAAGAGCTCGGCGCGGCA 1788  
QY 740 CTTGGACACACTTCTCCCGCTGCTCAGAGGGCGAGTACAAAGGACAGCCGTGCG 799  
DB 1789 GTTCGGCGTACGACACTGTGACGACGACCGGAGC-----GGCGAAGCTGGC 1839  
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DB 2317 CGGCGTCATGCTCTCATCTCTGCGCGGCGTGCCTCTCTGGGCAAG 2367

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Job time : 97 secs

GenCore version 5.1.3  
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OM protein - protein search, using sw model

Run on: January 26, 2003, 10:47:19 : Search time 24 Seconds  
(without alignments)  
763.770 Million cell updates/sec

Title: US-09-854-731A-4  
Perfect score: 3260  
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Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 262574 seqs, 29422922 residues

Total number of hits satisfying chosen parameters: 262574

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	3260	100.0	623	4	US-09-347-801-4 Sequence 4, Appl
2	2862	87.8	625	4	US-09-347-801-18 Sequence 18, Appl
3	1816.5	55.7	576	4	US-09-347-801-19 Sequence 19, Appl
4	883.5	27.1	639	4	US-09-347-801-17 Sequence 17, Appl
5	854	26.2	464	1	US-07-951-715A-22 Sequence 22, Appl
6	854	26.2	464	2	US-08-459-448A-22 Sequence 22, Appl
7	854	26.2	464	3	US-08-459-504B-22 Sequence 22, Appl
8	854	26.2	464	3	US-08-459-504B-22 Sequence 22, Appl
9	854	26.2	464	3	US-08-459-504B-22 Sequence 22, Appl
10	854	26.2	464	3	US-08-459-504B-22 Sequence 22, Appl
11	817	25.1	463	1	US-07-951-715A-25 Sequence 25, Appl
12	817	25.1	463	2	US-08-459-448A-25 Sequence 25, Appl
13	817	25.1	463	3	US-08-459-504B-25 Sequence 25, Appl
14	817	25.1	463	3	US-08-459-504B-25 Sequence 25, Appl
15	817	25.1	463	3	US-08-459-504B-25 Sequence 25, Appl
16	817	25.1	463	3	US-08-459-504B-25 Sequence 25, Appl
17	742	22.8	408	1	US-09-547-422-21 Sequence 21, Appl
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19	742	22.8	408	2	US-08-459-448A-21 Sequence 21, Appl
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21	742	22.8	408	3	US-08-459-504B-21 Sequence 21, Appl
22	742	22.8	408	3	US-08-459-504B-21 Sequence 21, Appl
23	548	16.8	456	1	US-09-547-422-21 Sequence 21, Appl
24	548	16.8	456	1	US-08-464-164-2 Sequence 2, Appl
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26	510	15.6	517	4	US-08-668-416-2 Sequence 2, Appl
27	505.5	15.5	370	2	US-09-257-825B-21 Sequence 21, Appl
					US-08-878-989-19 Sequence 19, Appl

28	505.5	15.5	370	4	US-09-272-796-19 Sequence 19, Appl
29	505.5	15.5	370	4	US-09-457-040B-31 Sequence 31, Appl
30	497	15.2	448	2	US-09-159-385-2 Sequence 2, Appl
31	497	15.2	448	4	US-09-186-277-2 Sequence 2, Appl
32	496.5	15.2	454	2	US-09-159-385-1 Sequence 1, Appl
33	496.5	15.2	454	2	US-09-186-277-1 Sequence 1, Appl
34	495	15.2	424	4	US-09-257-825B-20 Sequence 20, Appl
35	486.5	14.9	424	2	US-08-715-568A-1 Sequence 1, Appl
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38	472	14.5	111	4	US-09-347-801-8 Sequence 8, Appl
39	465	14.3	264	2	US-07-857-224B-24 Sequence 24, Appl
40	457	14.0	157	4	US-09-347-801-6 Sequence 6, Appl
41	453	13.9	1423	4	US-08-810-712-10 Sequence 10, Appl
42	450	13.8	264	2	US-07-857-224B-18 Sequence 18, Appl
43	449	13.8	331	4	US-08-810-712-24 Sequence 24, Appl
44	444.5	13.6	387	1	US-08-713-828-3 Sequence 3, Appl
45	444.5	13.6	387	2	US-08-919-627-3 Sequence 3, Appl

## ALIGNMENTS

RESULT 1									
US-09-347-801-4									
; Sequence 4, Application US/09347801									
; Patent No. 6262345									
; GENERAL INFORMATION:									
; APPLICANT: Allen, Steve									
; APPLICANT: Lee, Jian Ming									
; TITLE OF INVENTION: Plant Protein Kinases									
; FILE REFERENCE: BB-1171									
; CURRENT APPLICATION NUMBER: US/09/347, 801									
; CURRENT FILING DATE: 1999-07-02									
; EARLIER APPLICATION NUMBER: 60/092, 438									
; EARLIER FILING DATE: July 10, 1998									
; NUMBER OF SEQ ID NOS: 23									
; SOFTWARE: Microsoft Office 97									
; SEQ ID NO 4									
; LENGTH: 623									
; TYPE: PRT									
; ORGANISM: Oryza sativa									
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Matches 623; Conservative 0; Mismatches 0; Indels 0; Gaps 0;									
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QY	61	STTPGHOTPCVAMPSPYPSGASPLPAGVSPSPARSTRPFRFPFRPPSPAKHAKATLA	120						
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DB	61	STTPGHOTPCVAMPSPYPSGASPLPAGVSPSPARSTRPFRFPFRPPSPAKHAKATLA	120						
QY	121	KRLGGCKPKKGTTPBECGVAGAGGGGADGAETERPDKTFGRSKNGAKYELGEVGR	180						
DB	121	KRLGGCKPKKGTTPBECGVAGAGGGGADGAETERPDKTFGRSKNGAKYELGEVGR	180						
QY	181	GHRGHTCSAVVKKGEYKGVAVAKITAKAKMTTAISTEDVRRVKTILRALSGNNLVKFY	240						
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QY	241	DACEDGLNVIYVELCEGSELDRITLARGRYTEEDAKAIIVOILSVAFCHLQGVVHRD	300						
DB	241	DACEDGLNVIYVELCEGSELDRITLARGRYTEEDAKAIIVOILSVAFCHLQGVVHRD	300						
QY	301	LKEBNFLFTTRDENAPKLLIDFGISDFIRPDERLNDIVGSAIYVAPVYLRHSI SMEADIW	360						
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QY	361	SIGVITILLGSRPFAPARTESGIFRSVLRADPNEFDSPPPTYSAEKKDPVKRFLKNDYR	420						

Db 361 SIGVITVILLCGRPRWATGESIFRSVLRADPNFDDSPWPTVSAAKQFVRLNKDVR 420  
Qy 421 KRRTAVQALTHPWLDEQROIPLDILIFRLIKOYLRAFLKRLAKLSKALREDELLYL 480  
Db 422 KRRTAVQALTHPWLDEQROIPLDILIFRLIKOYLRAFLKRLAKLSKALREDELLYL 480  
Qy 481 KIQFKLEPRDGVSLDNFRALTRLTDAMKESRYLEFLHLEPLAARMQEEFCAA 540  
Db 481 KIQFKLEPRDGVSLDNFRALTRLTDAMKESRYLEFLHLEPLAARMQEEFCAA 540  
Qy 541 ISPYOLEALERMEIAGTAFQOEFGNGNVIISVEELAOELNLAPTYHSIVQDMIRKSDK 600  
Db 541 ISPYOLEALERMEIAGTAFQOEFGNGNVIISVEELAOELNLAPTYHSIVQDMIRKSDK 600  
Qy 601 LNFGLFTKFLHGVTTIRGSTRRH 623  
Db 601 LNFGLFTKFLHGVTTIRGSTRRH 623

RESULT 2  
US-09-347-801-18  
; Sequence 18, Application US/09347801  
; Patent No. 6262345  
; GENERAL INFORMATION:  
; APPLICANT: Allen, Steve  
; APPLICANT: Lee, Jian Ming  
; TITLE OF INVENTION: Plant Protein Kinases  
; FILE REFERENCE: BB-1171  
; CURRENT APPLICATION NUMBER: US/09/347,801  
; EARLIER FILING DATE: 1999-07-02  
; EARLIER APPLICATION NUMBER: 60/092,438  
; NUMBER OF SEQ ID NOS: 23  
; SOFTWARE: Microsoft Office 97  
; LENGTH: 625  
; TYPE: PRF  
; ORGANISM: Zea mays  
US-09-347-801-18

Query Match 87.8%; Score 2862; DB 4; Length 625;  
Best Local Similarity 87.7%; Pred. No. 5.3e-222;  
Matches 561; Conservative 16; Mismatches 31; Indels 32; Gaps 7;

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Qy 56 GSKSGSTTPGHO---TPG-VAMPSPYPSGASPLPAGVSPSPARSPRRFFKRRPPPS 110  
Db 48 --KSGSTTPPHNHQAATPCGAAMPSPYPAAGASPLPAGVSPSPARSPRRFFKRRPPPS 105  
Qy 111 PAKHAKATLAKRLGGKPKKGTIPBEGGVAGAGGGG-----GAADGAETPRDLKTG 163  
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Db 166 FAKNFAKADLGEVGRHGHGHTCSAVVKKGEHKGHTVAVKITAKAKMTTAISIEVRR 225  
Qy 224 VKTLRLSGNNLVKPYDACEEDGLNVIYVMECEGELLDRILARGRTYEPAKAIYO 283  
Db 226 VKTLKALSGHNDLVRYDACEEDALNVIYVMECEGELLDRILARGRTYEPAKAIYO 285  
Qy 284 ILSVAFCHLQGVVHDLKRENFLFTTRDENAPMKLIDGLSDFIRPDERLNDIVGSAY 343  
Db 286 ILSVAFCHLQGVVHDLKRENFLFTTRDESAPMKLIDGLSDFIRPDERLNDIVGSAY 345  
Qy 344 VAEVLRHRSISMDADWSIGVITVILLCGRPRWATGESIFRSVLRADPNFDDSPWPTVS 403  
Db 346 VAEVLRHRSISMDADWSIGVITVILLCGRPRWATGESIFRSVLRADPNFDDSPWPTVS 405

Qy 404 SAEAKDFVRRFLNKDVRKMYTAVQALTHPWLDEQROIPLDILIFRLIKOYLRAFLKRL 463  
Db 406 SAEAKDFVRRFLNKDVRKMYTAVQALTHPWLDEQROIPLDILIFRLIKOYLRAFLKRL 465  
Qy 464 ALKALSALREDELLYLKIQFKLEPRDGVSLDNFRALTRLTDAMKESRYLEFLH 523  
Db 466 ALKALSALREDELLYLKIQFKLEPRDGVSLDNFRALTRLTDAMKESRYLEFLH 525  
Qy 524 EPLAARMQEEFCAAAIISPYOLEALERMEIAGTAFQOEFGNGNVIISVEELAOELN 583  
Db 526 EPLAARMQEEFCAAAIISPYOLEALERMEIAGTAFQOEFGNGNVIISVEELAOELN 585  
Qy 584 PTYHSIVQDMIRKSDGLNFGFTKFLHGVTTIRGSTRRH 623  
Db 586 PTYHSIVQDMIRKSDGLNFGFTKFLHGVTTIRGSTRRH 625

RESULT 3  
US-09-347-801-19  
; Sequence 19, Application US/09347801  
; Patent No. 6262345  
; GENERAL INFORMATION:  
; APPLICANT: Allen, Steve  
; APPLICANT: Lee, Jian Ming  
; TITLE OF INVENTION: Plant Protein Kinases  
; FILE REFERENCE: BB-1171  
; CURRENT APPLICATION NUMBER: US/09/347,801  
; EARLIER FILING DATE: 1999-07-02  
; EARLIER APPLICATION NUMBER: 60/092,438  
; NUMBER OF SEQ ID NOS: 23  
; SOFTWARE: Microsoft Office 97  
; SEQ ID NO 19  
; LENGTH: 576  
; TYPE: PRF  
; ORGANISM: Arabidopsis thaliana  
US-09-347-801-19

Query Match 55.7%; Score 1816.5; DB 4; Length 576;  
Best Local Similarity 57.3%; Pred. No. 5.6e-138;  
Matches 358; Conservative 95; Mismatches 109; Indels 63; Gaps 9;

Qy 1 MGCCYCKGASGRTADDEGGVYTHQSPPPANGLPSTPPROQAQAQOQVGTPRRRGSKSG 60  
Db 1 MGCHCK-----PVHQQS-----KSLPVSGEINAEPTNSQ----- 30  
Qy 61 STTPGHQTPGVAMPSPYPSGASPLPAGVSPSPA-----RSTPRRRFFKRRPPSPAKKI 115  
Db 31 ---PPAKSSGFFPYSP-----SPVSLFKSSPSVSSVSTPLRLTKRFRPPSPAKKI 81  
Qy 116 KATLAKRLGGKPKKGTIPBEGGVAGAGGGGGAADGAETPRDLKTFFGSKNGAKYEIG 175  
Db 82 RAFLARRYGKPKNEVSIPE-----CKEETIGLDSFGFSKOPASHYEID 126  
Qy 176 KEYGRGHFGHTCSAVVKKGEYKQGTVAVKITAKAKMTTAISIEDVREVKILRLSGHNN 235  
Db 127 GEYGRGHFGHTCSAKKKGSLKQGEVAVKITPKSKMTTAIEDVREVKMLALGHKN 186  
Qy 236 LVKPYDACEEDGLNVIYVMECEGELLDRILARGRTYEPAKAIYOQILSVAFCHLOG 295  
Db 187 LVQPYDAFEDDENVIYVMECEGELLDRILORGKRYSEDDAKKVVQILSVAYCHLOG 246  
Qy 296 VVHRDLKRENFLFTTRDENAPMKLIDGLSDFIRPDERLNDIVGSAYVAEVLHRSYSM 355  
Db 247 VVHRDLKRENFLFTTRDENAPMKLIDGLSDFIRPDERLNDIVGSAYVAEVLHRSYSM 306  
Qy 356 EADIWSIGVITVILLCGRPRWATGESIFRSVLRADPNFDDSPWPTVSAAKQFVRL 415  
Db 307 EADMSIGVITVILLCGRPRWATGESIFRAVLAKNEPEAPWPSLSSEAVDPAKRL 366  
Qy 416 NKDYRRKMYTAVQALTHPWL-RDEQROIPLDILIFRLIKOYLRAFLKRLAKLSKALRE 474  
Db 367 NKDYRRKMYTAVQALCHPWLGVSGHSLKIPSDMIYKLVKVIYIMSTSLRKSALALAKTLTV 426









PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/459,595  
FILING DATE: 02-JUN-1995  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Meligs, J. Timothy  
REGISTRATION NUMBER: 38,241  
REFERENCE/DOCKET NUMBER: CGC1577/CIP/DIV  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8587  
TELEFAX: (919)541-8689  
INFORMATION FOR SEQ ID NO: 22:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 464 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..464  
OTHER INFORMATION: /note- "derived protein sequence of  
OTHER INFORMATION: pollen specific CDPK as disclosed in Figure 34."  
US-08-459-504B-22

Query Match 26.2% Score 854; DB 3; Length 464;  
Best Local Similarity 40.0%; Pred. No. 1e-60;  
Matches 186; Conservative 88; Mismatches 163; Indels 28; Gaps 10;  
QY 156 RPLDKTFEGSKNGAYELGKEVGRHFG--HTCSAVVKKGEYKQTVAVKIIAKAKMTT 213  
DB 4 RPME-----DVRATYSKMGELRGQFGVTHLCT-----HRTSGEKLAKTIKKRLAA 51  
QY 214 AISEIDVRRVKTLRALSGNNLVKRYDACEGLNYIWECEGSELLDRIIARCGRT 273  
DB 52 REDVDVRRVQIMHLSGPNVNGRGAYEDQSVHLVMELCAGGELPDRIIAR-GQYT 110  
QY 274 EEDAKAIIVOILSVAFCHLOGVVRHDLKPENFLFTTRDENAPMKLIDGLSPFIRPDR 333  
DB 111 ERGAELLRAIVQIVHTCSMGVMDIRKRENELLSKDEDAPLKATDGLSVFFEGEL 170  
QY 334 LNDIVSAYVVAPEVLRHSYMEADTWSIGVTYILLCSRPFWARTESGIFRSVIRADP 393  
DB 171 LNDIVSAYVVAPEVLRHSYMEADTWSIGVTYILLCSRPFWARTESGIFRSVIRADP 393  
QY 394 NFQDSFMPVSAEAKDFVKRLKDYRKMTAVQALTHPMLRD--EQROIPDLILFRIL 451  
DB 231 DLSSEFMPHISPAKDLVKMKLINPKERLTAQVLNHPKEDGAPPTPLDNLVVDRL 290  
QY 452 KOYLRAATPLKRLAKALREDELLYLKQFLKE-PROGVSLSDFNFTALTATLRTDA 510  
DB 291 KQVRANNOFKKALRTIAGLSEELTGKEMKNTDKDNGSGITITDELKHGLAKH-GPK 349  
QY 511 MKSRVLEFLHLEPLATYRMDFEECAAIISPYQLELRMEWELGTAFOQFEGSGNRY 570  
DB 350 LQSEMEKELMEADADGNGLIDDEFVTATV--HNNKLDL-EEHLYTAFQYEDKDNNGY 405  
QY 571 ISVEEL-----AOELNAPTHYSIVODWIRKSGKLNPLGTFKFL 610  
DB 406 ITKEELHAKKEGLYDADKIKDIISDADSDNGRIDYSEETVAM 450

RESULT 9  
US-08-459-444-22  
Sequence 0, Application US/08459444A  
Patent No. 6121014  
GENERAL INFORMATION:  
APPLICANT: Kozziel, Michael G.

Desai, Nalini M.  
Lewis, Kelly S.  
Kramer, Vance C.  
Watten, Gregory W.  
Evola, Stephen V.  
Crossland, Lyle D.  
Wright, Martha S.  
Merlin, Ellis J.  
Lauais, Karen L.  
TITLE OF INVENTION: METHOD FOR PRODUCING A PLANT-OPTIMIZED  
NUCLEIC ACID CODING SEQUENCE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: No. 6121014artis Agribusiness Biotechnology Research, Inc.  
STREET: 3054 Cornwallis Road  
CITY: Research Triangle Park  
STATE: NC  
COUNTRY: USA  
ZIP: 27709  
COMPUTER READABLE FORM:  
MEDIUM TYPE: floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patentin Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/459,444A  
FILING DATE: 02-Jun-1995  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991  
ATTORNEY/AGENT INFORMATION:  
NAME: Meligs, J. Timothy  
REGISTRATION NUMBER: 38,241  
REFERENCE/DOCKET NUMBER: S-18805/PI/CGC1577/CIP/DIV6  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8689  
TELEFAX: (919)541-8587  
INFORMATION FOR SEQ ID NO: /note- "derived protein sequence of  
pollen specific CDPK as disclosed in Figure 34."  
SEQUENCE CHARACTERISTICS:  
LENGTH: 464 amino acids  
TYPE: amino acid  
STRANDEDNESS: single  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
HYPOTHETICAL: NO  
FEATURE:  
NAME/KEY: Protein  
LOCATION: 1..464  
OTHER INFORMATION: /note- "derived protein sequence of  
OTHER INFORMATION: pollen specific CDPK as disclosed in Figure 34."  
US-08-459-444-22

Query Match 26.2% Score 854; DB 3; Length 464;  
Best Local Similarity 40.0%; Pred. No. 1e-60;  
Matches 186; Conservative 88; Mismatches 163; Indels 28; Gaps 10;  
QY 156 RPLDKTFEGSKNGAYELGKEVGRHFG--HTCSAVVKKGEYKQTVAVKIIAKAKMTT 213  
DB 4 RPME-----DVRATYSKMGELRGQFGVTHLCT-----HRTSGEKLAKTIKKRLAA 51  
QY 214 AISEIDVRRVKTLRALSGNNLVKRYDACEGLNYIWECEGSELLDRIIARCGRT 273  
DB 52 REDVDVRRVQIMHLSGPNVNGRGAYEDQSVHLVMELCAGGELPDRIIAR-GQYT 110  
QY 274 EEDAKAIIVOILSVAFCHLOGVVRHDLKPENFLFTTRDENAPMKLIDGLSPFIRPDR 333  
DB 111 ERGAELLRAIVQIVHTCSMGVMDIRKRENELLSKDEDAPLKATDGLSVFFEGEL 170  
QY 334 LNDIVSAYVVAPEVLRHSYMEADTWSIGVTYILLCSRPFWARTESGIFRSVIRADP 393

Db 171 LRDIVGSAYIYIADEVILKRYKGGPEADIWGVMLYIFLAGVPPWMAENENGIFTAILRGOL 230  
QY 394 NFDSDPWPVSAEAKDFVKRFNLKDYRKRTAVQALTHPWLRD--EORQIPLDILIFRLI 451  
Db 231 DLSEEPWPHISPAGKDLVKKMLNINPKERLTAFQVLNHPMKIEDGADPDPPLDNVLDRL 230  
QY 452 KQYLRTAPLKLRLAKLSKALREDELLYLKLOFKLE-PRDGVSLDNFTALTTRYLTDA 510  
Db 291 KQFRANNOEFKALRIIAGLSEETIGLKEMFKNIDKNSGTTTIDELKHGLAKH-GPK 349  
QY 511 MKSRVLEFLHALEPLAYRMDFEFCAAISPYLEALERWEIAGTAFQOFEQGNRV 570  
Db 350 LSDSEMEKLMADADGNGLIDDEFYATV---HMKLDR-BEHLTYTAFQYFDKDSNGY 405  
QY 571 ISVEEL-----AOELNLAPTHYSIVODWIRKSDGKLNFLGFTKFL 610  
Db 406 ITKEELEHALKEGGLYDADKIKIDIISDADSDNGRIDYSEFVAM 450

RESULT 10  
US-09-547-422-22  
; Sequence 0, Application US/09547422  
; Patent No. 6130100  
; GENERAL INFORMATION:  
; APPLICANT: Kozziel, Michael G.  
; Desai, Nalin M.  
; Lewis, Kelly S.  
; Kramer, Vance C.  
; Warren, Gregory W.  
; Evola, Stephen V.  
; Crossland, Lyle D.  
; Wright, Martha S.  
; Merlin, Ellis J.  
; Launis, Karen L.

TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
INSECTICIDAL ACTIVITY IN MAIZE

NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSER: No. 6130100artis Agribusiness Biotechnology Research, Inc.  
STREET: 3054 Cornwallis Road  
CITY: Research Triangle Park  
STATE: NC  
COUNTRY: USA  
ZIP: 27709

COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/547,422  
FILING DATE: 11-Apr-2000  
CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:  
APPLICATION NUMBER: US 08/459,595  
FILING DATE: 02-JUN-1995  
APPLICATION NUMBER: US 07/951,715  
FILING DATE: 25-SEP-1992  
APPLICATION NUMBER: US 07/772,027  
FILING DATE: 04-OCT-1991

ATTORNEY/AGENT INFORMATION:  
NAME: Meigs, J. Timothy  
REGISTRATION NUMBER: 38,241  
REFERENCE/DOCKET NUMBER: S-18805H

TELECOMMUNICATION INFORMATION:  
TELEPHONE: (919)541-8587  
TELEFAX: (919)541-8689

INFORMATION FOR SEQ ID NO: 1  
pollen specific CDK as disclosed in Figure 34."

SEQUENCE CHARACTERISTICS:  
LENGTH: 464 amino acids  
TYPE: amino acid  
STRANDEDNESS: single

; TOPOLOGY: linear  
; MOLECULE TYPE: protein  
; HYPOTHETICAL: NO  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 1..464  
; SEQUENCE DESCRIPTION: SEQ ID NO: 22:  
US-09-547-422-22

Query Match 26.2%; Score 854; DB 4; Length 464;  
Best Local Similarity 40.0%; Pred. No. 1e-60;  
Matches 186; Conservative 88; Mismatches 163; Indels 28; Gaps 10;

QY 156 RPLDKTFGFSKNGKAEKELKEVGRGHFG--HFGSAVVKGGEGQTVAAKIIAKAMTT 213  
Db 4 RPME-----DVRATYSKGEIKRGQFGYTHICT-----HRTSGELACKTTAKKRLAA 51  
QY 214 A1SIEDVRRVKILRALISGHNMLVKFYDAGEDGLNVIYVIELCEGBELDRIIARGRYT 273  
Db 52 REDVDVRRREVQIMHHLSGQPNVVGIRGAYEDKOSVHLVIELCAGGELFDRITAR-GQYT 110  
QY 274 EEDAKAVVQILSVAFCHIQGVVHRDLKRPENFLTFRDENAIPKLLDEGLSDFIRPDER 333  
Db 111 ERGAETLRALIVQIVHTCHSGMGNHRDIPKPNFLLSKDDADAPLAKATDFGLSVFEKGE 170  
QY 334 LNDIVGSAYVVAPEVLHRSYSMEADISGIVTYIILGSGSRPPWARTSGIFRSVLRADP 393  
Db 171 LRDIVGSAYIYIADEVILKRYKGGPEADIWGVMLYIFLAGVPPWMAENENGIFTAILRGOL 230  
QY 394 NFDSDPWPVSAEAKDFVKRFNLKDYRKRTAVQALTHPWLRD--EORQIPLDILIFRLI 451  
Db 231 DLSEEPWPHISPAGKDLVKKMLNINPKERLTAFQVLNHPMKIEDGADPDPPLDNVLDRL 290  
QY 452 KQYLRTAPLKLRLAKLSKALREDELLYLKLOFKLE-PRDGVSLDNFTALTTRYLTDA 510  
Db 291 KQFRANNOEFKALRIIAGLSEETIGLKEMFKNIDKNSGTTTIDELKHGLAKH-GPK 349  
QY 511 MKSRVLEFLHALEPLAYRMDFEFCAAISPYLEALERWEIAGTAFQOFEQGNRV 570  
Db 350 LSDSEMEKLMADADGNGLIDDEFYATV---HMKLDR-BEHLTYTAFQYFDKDSNGY 405  
QY 571 ISVEEL-----AOELNLAPTHYSIVODWIRKSDGKLNFLGFTKFL 610  
Db 406 ITKEELEHALKEGGLYDADKIKIDIISDADSDNGRIDYSEFVAM 450

RESULT 11  
US-07-951-715A-25  
; Sequence 25, Application US/07951715A  
; Patent No. 5625136  
; GENERAL INFORMATION:  
; APPLICANT: Kozziel, Michael G.  
; Desai, Nalin M.  
; Lewis, Kelly S.  
; Kramer, Vance C.  
; Warren, Gregory W.  
; Evola, Stephen V.  
; Crossland, Lyle D.  
; Wright, Martha S.  
; Merlin, Ellis J.  
; Launis, Karen L.  
; Rothstein, Steven J.  
; Bowman, Cindy G.  
; Dawson, John L.  
; Applicant: Pace, Gary M.  
; Applicant: Dunder, Erik M.  
; Applicant: Suttie, Janet L.  
; TITLE OF INVENTION: SYNTHETIC DNA SEQUENCE HAVING ENHANCED  
INSECTICIDAL ACTIVITY IN MAIZE  
NUMBER OF SEQUENCES: 94  
CORRESPONDENCE ADDRESS:  
ADDRESSER: CIBA-GEIGY Corporation  
STREET: 7 Skyline Drive









	TELEPHONE: (919)541-8587	
	TELEFAX: (919)541-8689	
	INFORMATION FOR SEQ ID NO: /note- "protein sequence for	
	soybean CPK as shown in Figure 34."	
	SEQUENCE CHARACTERISTICS:	
	LENGTH: 463 amino acids	
	TYPE: amino acid	
	STRANDEDNESS: single	
	TOPOLOGY: linear	
	MOLECULE TYPE: protein	
	HYPOTHEICAL: NO	
	FEATURE:	
	NAME/KEY: Protein	
	LOCATION: 1..463	
	SEQUENCE DESCRIPTION: SEQ ID NO: 25:	
	US-08-459-444-25	
Query Match	25.1%; Score 817; DB 3; Length 463;	
Best Local Similarity	38.9%; Pred. No. 9.8e-58;	
Matches 178: Conservative 94; Mismatches 160; Indels 26; Gaps 11;		
QY 165	SKNFCAKYEELGKVGRRGHGHT--CSAVVKKGEYGGGVAVYVIAAKMTAISTEDVR 222	
DB 6	TQNIREYVEYGVGRKLGGQGGFTTFECTRRASGSKF-----ACKSIPKRLCKEDYEDVWR 60	
QY 223	EVKILRALSGHNHLKFFDADCEGLNVIYVMLECEGGELLDLARGGRYTEEDAKAIV 282	
DB 61	ELQIMHNLSEHANNVRIIGTYEDSTAVNHLVMELECGELFDRIYVK--GHYSRQAARLIK 119	
QY 283	QILSYVAFCHLOGVVNRDLKRPENLFTTRDENAPMKLIDFGLSDFIKPDRLNDIVGSAY 342	
DB 120	TIVEVVEACHSGISVYHNRDLKRPENLFTDIEDAKLKTDFGLSVFYKKPEESFCDVAGSPY 179	
QY 343	YVAPRVLRSSYSMEDIMSIGIYITILLCGSPRPVARESGTFRSRYLRADPWFDDSPWPT 402	
DB 180	YVAPRVLRKLIGPESDVWSAGVITLILSGVPPVAESSEPGIFRQILGKIDFHSPPWS 239	
QY 403	VSAEAKDFVKRFLNDYVRRKMTAVOALTHPWLDEQ--ROIPLDILIFRLIKOYLRAPL 460	
DB 240	ISDSAKDLIRKMLDNPTRLTAHEVLRHPVLYVDONIAIDKRLDSAVLSRLQFSAMKL 299	
QY 461	KRLALKALSKALREDELLYLKQLFLL--PRDFVSLDNFRTALTRYITLDMKESRVLEF 519	
DB 300	KMALRVIAERLSEEEIIGLKEFLFKMIDPDNDSGITFDLKGKLRVSGELM--ESPIKDL 358	
QY 520	LHALEPLAVRRDVEEFCAALISPOLALEMWEELAGTAFOQFEQGNRYISVEELAO- 578	
DB 359	MDAADIDKSGTIDYGEFLTAIV--HLNKLEEREENLV--SAFSYFPDKSGYITLDEIOQA 414	
QY 579	--ELNLAPHYISIVODMTRK----SDGKLNELGTFKFL 610	
DB 415	CKDFGLDIDH--IDMTKEIDDDNDGGQIDYGEFLAAM 449	

Search completed: January 26, 2003, 11:51:49  
Job time : 26 secs

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